



## Complete Summary

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### **GUIDELINE TITLE**

Medical conditions affecting sports participation.

### **BIBLIOGRAPHIC SOURCE(S)**

Rice SG, American Academy of Pediatrics Council on Sports Medicine and Fitness. Medical conditions affecting sports participation. Pediatrics 2008 Apr;121(4):841-8. [67 references] [PubMed](#)

### **GUIDELINE STATUS**

This is the current release of the guideline.

All clinical reports from the American Academy of Pediatrics automatically expire 5 years after publication unless reaffirmed, revised, or retired at or before that time.

## COMPLETE SUMMARY CONTENT

SCOPE  
METHODOLOGY - including Rating Scheme and Cost Analysis  
RECOMMENDATIONS  
EVIDENCE SUPPORTING THE RECOMMENDATIONS  
BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS  
QUALIFYING STATEMENTS  
IMPLEMENTATION OF THE GUIDELINE  
INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES  
IDENTIFYING INFORMATION AND AVAILABILITY  
DISCLAIMER

## SCOPE

### **DISEASE/CONDITION(S)**

Medical conditions affecting sports participation

### **GUIDELINE CATEGORY**

Counseling  
Evaluation  
Prevention  
Risk Assessment

### **CLINICAL SPECIALTY**

Family Practice  
Pediatrics  
Preventive Medicine  
Sports Medicine

## **INTENDED USERS**

Advanced Practice Nurses  
Patients  
Physician Assistants  
Physicians  
Students

## **GUIDELINE OBJECTIVE(S)**

- To provide information for pediatricians regarding sports participation for children and adolescents with medical conditions
- To update the 2001 policy statement and provide additions and changes to increase the accuracy and completeness of the information

## **TARGET POPULATION**

Children and adolescents with medical conditions who wish to participate in athletic activities or sports

## **INTERVENTIONS AND PRACTICES CONSIDERED**

1. Assessment of the child's health status
2. Assessment of relative risk of an acute injury from participation in athletic activities or sports
3. Suggesting appropriate equipment or modifications of sports to decrease the risk of injury
4. Education of the athlete, parent(s) or guardian, and coach regarding the risks of injury as they relate to the child's condition

## **MAJOR OUTCOMES CONSIDERED**

- Incidence and prevalence of acute traumatic injuries from blows to the body
- Incidence and prevalence of overuse injuries
- Morbidity and mortality

## **METHODOLOGY**

### **METHODS USED TO COLLECT/SELECT EVIDENCE**

Hand-searches of Published Literature (Primary Sources)  
Hand-searches of Published Literature (Secondary Sources)

### **DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE**

The principal author (and his two sports medicine fellows) used the reference source in the monograph on the Pre-Participation Physical Evaluation published in 2004. That nearly 200-page book contained hundreds of references in each chapter. These were systematically explored, read, and selected based on their relevance, quality, and timeliness.

New position statements and documents are produced regularly (ie., the Bethesda Reports on cardiac conditions, Blood Pressure Study groups, international conferences on concussion management, position statements of major allied sports medicine organizations). The author was aware of these and included these within the statement and references.

The author subscribes to several major sports medicine and pediatrics journals, and each month the issues were reviewed for new relevant papers.

Expert opinion was sought out in specific situations, such as from a sports medicine attorney, who provided citations from current legal opinions.

#### **NUMBER OF SOURCE DOCUMENTS**

Not stated

#### **METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE**

Not stated

#### **RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE**

Not applicable

#### **METHODS USED TO ANALYZE THE EVIDENCE**

Systematic Review

#### **DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE**

Not stated

#### **METHODS USED TO FORMULATE THE RECOMMENDATIONS**

Not stated

#### **RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS**

Not applicable

#### **COST ANALYSIS**

A formal cost analysis was not performed and published cost analyses were not reviewed.

## METHOD OF GUIDELINE VALIDATION

Internal Peer Review

## DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

All of the relevant subspecialty sections and committees of the American Academy of Pediatrics were asked to review the manuscript and offer criticisms and suggestions; at their suggestion, these experts requested that new sections be added and provided current supportive evidence-based literature to press their desire for inclusion.

## RECOMMENDATIONS

### MAJOR RECOMMENDATIONS

The physician's clinical judgment is essential in the application of these recommendations to a specific patient. This judgment is enhanced by consideration of the available published information on the risks of participation, the risk of acquiring a disease as a result of participation in the sport, and the severity of that disease. Other variables to consider include (1) the advice of knowledgeable experts, (2) the current health status of the athlete, (3) the sport in which the athlete participates, (4) the position played, (5) the level of competition, (6) the maturity of the competitor, (7) the relative size of the athlete (for collision/contact sports), (8) the availability of effective protective equipment that is acceptable to the athlete and/or sport governing body, (9) the availability and efficacy of treatment, (10) whether treatment (e.g., rehabilitation of an injury) has been completed, (11) whether the sport can be modified to allow safer participation, and (12) the ability of the athlete's parent(s) or guardian and coach to understand and to accept the risks involved in participation. Potential dangers of associated training activities that lead to repetitive and/or excessive overload also should be considered.

For most chronic health conditions, current evidence supports and encourages the participation of children and adolescents in most athletic activities. However, the medical conditions listed in the table below have been assessed to determine whether participation would create an increased risk of injury or affect the child's medical condition adversely. These guidelines can be valuable when a physician examines an athlete who has one of the listed problems. Decisions about sports participation are often complex, and the usefulness of the table below is limited by the frequency with which it recommends individual assessment when a "qualified yes" or a "qualified no" appears.

**Table: Medical Conditions and Sports Participation**

Condition	May Participate
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Condition	May Participate
<p>Atlantoaxial instability (instability of the joint between cervical vertebrae 1 and 2)</p> <p>Explanation: Athlete (particularly if he or she has Down syndrome or juvenile rheumatoid arthritis with cervical involvement) needs evaluation to assess the risk of spinal cord injury during sports participation, especially when using a trampoline. (American Academy of Pediatrics [AAP], Committee on Injury and Poison Prevention, Committee on Sports Medicine and Fitness, 1999; Maranich, Hamele, &amp; Fairchok, 2006; AAP, Committee on Sports Medicine and Fitness, "Atlanto-axial instability," 1995; American Academy of Family Physicians et al., 2004)</p>	<p>Qualified yes</p>
<p>Bleeding disorder</p> <p>Explanation: Athlete needs evaluation. (Mercer &amp; Densmore, 2005; National Hemophilia Foundation, 2005)</p>	<p>Qualified yes</p>
<p>Cardiovascular disease</p> <p>Carditis (inflammation of the heart)</p> <p>Explanation: Carditis may result in sudden death with exertion.</p>	<p>No</p>
<p>Hypertension (high blood pressure)</p> <p>Explanation: Those with hypertension &gt;5 mmHg above the 99th percentile for age, gender, and height should avoid heavy weightlifting and power lifting, bodybuilding, and high-static component sports (see Figure 1 in the original guideline document). Those with sustained hypertension (&gt;95th percentile for age, gender, and height) need evaluation. (National High Blood Pressure Education Program Working Group on High Blood Pressure in Children and Adolescents, 2004; AAP, 1997; American College of Cardiology Foundation, 36<sup>th</sup> Bethesda Conference, 2005) The National High Blood Pressure Education Program Working Group report defined prehypertension and stage 1 and stage 2 hypertension in children and adolescents younger than 18 years of age. (National High Blood Pressure Education Program Working Group on High Blood Pressure in Children and Adolescents, 2004)</p>	<p>Qualified yes</p>
<p>Congenital heart disease (structural heart defects present at birth)</p>	<p>Qualified yes</p>

Condition	May Participate
<p>Explanation: Consultation with a cardiologist is recommended. Those who have mild forms may participate fully in most cases; those who have moderate or severe forms or who have undergone surgery need evaluation. The 36th Bethesda Conference (American College of Cardiology Foundation, 36<sup>th</sup> Bethesda Conference, 2005) defined mild, moderate, and severe disease for common cardiac lesions.</p>	
<p>Dysrhythmia (irregular heart rhythm)</p> <p>Long-QT syndrome</p> <p>Malignant ventricular arrhythmias</p> <p>Symptomatic Wolff-Parkinson-White syndrome</p> <p>Advanced heart block</p> <p>Family history of sudden death or previous sudden cardiac event</p> <p>Implantation of a cardioverter-defibrillator</p> <p>Explanation: Consultation with a cardiologist is advised. Those with symptoms (chest pain, syncope, near-syncope, dizziness, shortness of breath, or other symptoms of possible dysrhythmia) or evidence of mitral regurgitation on physical examination need evaluation. All others may participate fully. (Maron et al., 2007; AAP, Committee on Sports Medicine and Fitness, "Cardiac dysrhythmias," 1995; Freed et al., 1999)</p>	<p>Qualified yes</p>
<p>Heart murmur</p> <p>Explanation: If the murmur is innocent (does not indicate heart disease), full participation is permitted. Otherwise, athlete needs evaluation (see structural heart disease, especially hypertrophic cardiomyopathy and mitral valve prolapse).</p>	<p>Qualified yes</p>
<p>Structural/acquired heart disease</p> <p>Hypertrophic cardiomyopathy</p>	<p>Qualified no</p>
<p>Coronary artery anomalies</p>	<p>Qualified no</p>

Condition	May Participate
Arrhythmogenic right ventricular cardiomyopathy	Qualified no
Acute rheumatic fever with carditis	Qualified no
Ehlers-Danlos syndrome, vascular form	Qualified no
Marfan syndrome	Qualified yes
Mitral valve prolapse	Qualified yes
<p data-bbox="332 772 570 804">Anthracycline use</p> <p data-bbox="427 821 997 1850">Explanation: Consultation with a cardiologist is recommended. The 36th Bethesda Conference provided detailed recommendations. (American College of Cardiology Foundation, 36<sup>th</sup> Bethesda Conference, 2005; Maron et al., 2007; Freed et al., 1999; Maron, 2003; Maron, 2002; Pyeritz, 2000) Most of these conditions carry a significant risk of sudden cardiac death associated with intense physical exercise. Hypertrophic cardiomyopathy requires thorough and repeated evaluations, because disease may change manifestations during later adolescence. (American College of Cardiology Foundation, 36<sup>th</sup> Bethesda Conference, 2005; Maron et al., 2007; Maron, 2002) Marfan syndrome with an aortic aneurysm also can cause sudden death during intense physical exercise. (Pyeritz, 2000) Athlete who has ever received chemotherapy with anthracyclines may be at increased risk of cardiac problems because of the cardiotoxic effects of the medications, and resistance training in this population should be approached with caution; strength training that avoids isometric contractions may be permitted. (AAP, Council on Sports Medicine, 2008; Steinherz et al., 1991) Athlete needs evaluation.</p>	Qualified yes

Condition	May Participate
<p>Vasculitis/vascular disease</p> <p>Kawasaki disease (coronary artery vasculitis)</p> <p>Pulmonary hypertension</p> <p>Explanation: Consultation with a cardiologist is recommended. Athlete needs individual evaluation to assess risk on the basis of disease activity, pathologic changes, and medical regimen. (Newburger et al., 2004)</p>	<p>Qualified yes</p>
<p>Cerebral palsy</p> <p>Explanation: Athlete needs evaluation to assess functional capacity to perform sports-specific activity.</p>	<p>Qualified yes</p>
<p>Diabetes mellitus</p> <p>Explanation: All sports can be played with proper attention and appropriate adjustments to diet (particularly carbohydrate intake), blood glucose concentrations, hydration, and insulin therapy. Blood glucose concentrations should be monitored before exercise, every 30 min during continuous exercise, 15 min after completion of exercise, and at bedtime.</p>	<p>Yes</p>
<p>Diarrhea, infectious</p> <p>Explanation: Unless symptoms are mild and athlete is fully hydrated, no participation is permitted, because diarrhea may increase risk of dehydration and heat illness (see fever).</p>	<p>Qualified no</p>
<p>Eating disorders</p> <p>Explanation: Athlete with an eating disorder needs medical and psychiatric assessment before participation.</p>	<p>Qualified yes</p>
<p>Eyes</p> <p>Functionally 1-eyed athlete</p> <p>Loss of an eye</p> <p>Detached retina or family history of retinal detachment at young age</p>	<p>Qualified yes</p>



Condition	May Participate
<p>High myopia</p> <p>Connective tissue disorder, such as Marfan or Stickler syndrome</p> <p>Previous intraocular eye surgery or serious eye injury</p> <p>Explanation: A functionally 1-eyed athlete is defined as having best-corrected visual acuity worse than 20/40 in the poorer-seeing eye. Such an athlete would suffer significant disability if the better eye were seriously injured, as would an athlete with loss of an eye. Specifically, boxing and full-contact martial arts are not recommended for functionally 1-eyed athletes, because eye protection is impractical and/or not permitted. Some athletes who previously underwent intraocular eye surgery or had a serious eye injury may have increased risk of injury because of weakened eye tissue. Availability of eye guards approved by the American Society for Testing and Materials and other protective equipment may allow participation in most sports, but this must be judged on an individual basis. (Gomez, 2003; AAP, Committee of Sports Medicine and Fitness, 2004)</p>	
<p>Conjunctivitis, infectious</p> <p>Explanation: Athlete with active infectious conjunctivitis should be excluded from swimming.</p>	Qualified no
<p>Fever</p> <p>Explanation: Elevated core temperature may be indicative of a pathologic medical condition (infection or disease) that is often manifest by increased resting metabolism and heart rate. Accordingly, during athlete's usual exercise regimen, the presence of fever can result in greater heat storage, decreased heat tolerance, increased risk of heat illness, increased cardiopulmonary effort, reduced maximal exercise capacity, and increased risk of hypotension because of altered vascular tone and dehydration. On rare occasions, fever may accompany myocarditis or other conditions that may make usual exercise dangerous.</p>	No
<p>Gastrointestinal</p> <p>Malabsorption syndromes (celiac disease or cystic fibrosis)</p> <p>Explanation: Athlete needs individual assessment for</p>	Qualified yes

Condition	May Participate
<p>general malnutrition or specific deficits resulting in coagulation or other defects; with appropriate treatment, these deficits can be treated adequately to permit normal activities.</p> <p>Short-bowel syndrome or other disorders requiring specialized nutritional support, including parenteral or enteral nutrition</p> <p>Explanation: Athlete needs individual assessment for collision, contact, or limited-contact sports. Presence of central or peripheral, indwelling, venous catheter may require special considerations for activities and emergency preparedness for unexpected trauma to the device(s).</p>	
<p>Heat illness, history of</p> <p>Explanation: Because of the likelihood of recurrence, athlete needs individual assessment to determine the presence of predisposing conditions and behaviors and to develop a prevention strategy that includes sufficient acclimatization (to the environment and to exercise intensity and duration), conditioning, hydration, and salt intake, as well as other effective measures to improve heat tolerance and to reduce heat injury risk (such as protective equipment and uniform configurations). (AAP, Committee on Sports Medicine and Fitness, 2000; Bergeron et al., 2005)</p>	<p>Qualified yes</p>
<p>Hepatitis, infectious (primarily hepatitis C)</p> <p>Explanation: All athletes should receive hepatitis B vaccination before participation. Because of the apparent minimal risk to others, all sports may be played as athlete's state of health allows. For all athletes, skin lesions should be covered properly, and athletic personnel should use universal precautions when handling blood or body fluids with visible blood. (AAP, Committee on Sports Medicine and Fitness, "Human immunodeficiency virus," 1999)</p>	<p>Yes</p>
<p>HIV infection</p> <p>Explanation: Because of the apparent minimal risk to others, all sports may be played as athlete's state of health allows (especially if viral load is undetectable or very low). For all athletes, skin lesions should be covered properly, and athletic personnel should use universal precautions when handling blood or body fluids with visible blood. (AAP, Committee on Sports Medicine and Fitness, "Human immunodeficiency virus," 1999) However, certain sports (such as wrestling and boxing) may create a situation that favors viral transmission (likely bleeding plus skin breaks). If viral load is</p>	<p>Yes</p>

Condition	May Participate
detectable, then athletes should be advised to avoid such high-contact sports.	
<p>Kidney, absence of one</p> <p>Explanation: Athlete needs individual assessment for contact, collision, and limited-contact sports. Protective equipment may reduce risk of injury to the remaining kidney sufficiently to allow participation in most sports, providing such equipment remains in place during activity. (Gomez, 2003)</p>	Qualified yes
<p>Liver, enlarged</p> <p>Explanation: If the liver is acutely enlarged, then participation should be avoided because of risk of rupture. If the liver is chronically enlarged, then individual assessment is needed before collision, contact, or limited-contact sports are played. Patients with chronic liver disease may have changes in liver function that affect stamina, mental status, coagulation, or nutritional status.</p>	Qualified yes
<p>Malignant neoplasm</p> <p>Explanation: Athlete needs individual assessment. (Dickerman, 2007)</p>	Qualified yes
<p>Musculoskeletal disorders</p> <p>Explanation: Athlete needs individual assessment.</p>	Qualified yes
<p>Neurologic disorders</p> <p>History of serious head or spine trauma or abnormality, including craniotomy, epidural bleeding, subdural hematoma, intracerebral hemorrhage, second-impact syndrome, vascular malformation, and neck fracture. (AAP, Committee on Injury and Poison Prevention, Committee on Sports Medicine and Fitness, 1999; Maranich, Hamele, &amp; Fairchok, 2006; Wojtys et al., 1999; McCrory et al., 2005; Aubry et al., 2002)</p> <p>Explanation: Athlete needs individual assessment for collision, contact, or limited-contact sports.</p>	Qualified yes
<p>History of simple concussion (mild traumatic brain injury), multiple simple concussions, and/or complex concussion</p> <p>Explanation: Athlete needs individual assessment. Research supports a conservative approach to concussion management, including no athletic</p>	Qualified yes

Condition	May Participate
<p>participation while symptomatic or when deficits in judgment or cognition are detected, followed by graduated return to full activity. (Wojtys et al., 1999; McCrory et al., 2005; Aubry et al., 2002; "Concussion," 2006; Guskiewicz et al., 2004)</p>	
<p>Myopathies</p> <p>Explanation: Athlete needs individual assessment.</p>	<p>Qualified yes</p>
<p>Recurrent headaches</p> <p>Explanation: Athlete needs individual assessment. (Lewis et al., 2002)</p>	<p>Yes</p>
<p>Recurrent plexopathy (burner or stinger) and cervical cord neuropraxia with persistent defects</p> <p>Explanation: Athlete needs individual assessment for collision, contact, or limited-contact sports; regaining normal strength is important benchmark for return to play. (Castro, 2003; Weinberg, Rokito, &amp; Silver, 2003)</p>	<p>Qualified yes</p>
<p>Seizure disorder, well controlled</p> <p>Explanation: Risk of seizure during participation is minimal. (Hirtz et al., 2003)</p>	<p>Yes</p>
<p>Seizure disorder, poorly controlled</p> <p>Explanation: Athlete needs individual assessment for collision, contact, or limited-contact sports. The following noncontact sports should be avoided: archery, riflery, swimming, weightlifting, power lifting, strength training, and sports involving heights. In these sports, occurrence of a seizure during activity may pose a risk to self or others. (Hirtz et al., 2003)</p>	<p>Qualified yes</p>
<p>Obesity</p> <p>Explanation: Because of the increased risk of heat illness and cardiovascular strain, obese athlete particularly needs careful acclimatization (to the environment and to exercise intensity and duration), sufficient hydration, and potential activity and recovery modifications during competition and training. (AAP, Council on Sports Medicine and Fitness and Council on School Health, 2006)</p>	<p>Yes</p>

Condition	May Participate
<p>Organ transplant recipient (and those taking immunosuppressive medications)</p> <p>Explanation: Athlete needs individual assessment for contact, collision, and limited-contact sports. In addition to potential risk of infections, some medications (e.g., prednisone) may increase tendency for bruising.</p>	<p>Qualified yes</p>
<p>Ovary, absence of one</p> <p>Explanation: Risk of severe injury to remaining ovary is minimal.</p>	<p>Yes</p>
<p>Pregnancy/postpartum</p> <p>Explanation: Athlete needs individual assessment. As pregnancy progresses, modifications to usual exercise routines will become necessary. Activities with high risk of falling or abdominal trauma should be avoided. Scuba diving and activities posing risk of altitude sickness should also be avoided during pregnancy. After the birth, physiological and morphologic changes of pregnancy take 4 to 6 weeks to return to baseline. (American College of Obstetricians and Gynecologists, 2002; Morales, Dumps, &amp; Extermann, 1999)</p>	<p>Qualified yes</p>
<p>Respiratory conditions</p> <p>Pulmonary compromise, including cystic fibrosis</p> <p>Explanation: Athlete needs individual assessment but, generally, all sports may be played if oxygenation remains satisfactory during graded exercise test. Athletes with cystic fibrosis need acclimatization and good hydration to reduce risk of heat illness.</p>	<p>Qualified yes</p>
<p>Asthma</p> <p>Explanation: With proper medication and education, only athletes with severe asthma need to modify their participation. For those using inhalers, recommend having a written action plan and using a peak flowmeter daily. (National Heart, Lung, and Blood Institute, 2007; American College of Allergy, Asthma, and Immunology, 2006; Storms, 2003; Holzer &amp; Brukner, 2004) Athletes with asthma may encounter risks when scuba diving.</p>	<p>Yes</p>
<p>Acute upper respiratory infection</p>	<p>Qualified yes</p>

Condition	May Participate
<p>Explanation: Upper respiratory obstruction may affect pulmonary function. Athlete needs individual assessment for all except mild disease (see fever).</p>	
<p>Rheumatologic diseases</p> <p>Juvenile rheumatoid arthritis</p> <p>Explanation: Athletes with systemic or polyarticular juvenile rheumatoid arthritis and history of cervical spine involvement need radiographs of vertebrae C1 and C2 to assess risk of spinal cord injury. Athletes with systemic or HLA-B27-associated arthritis require cardiovascular assessment for possible cardiac complications during exercise. For those with micrognathia (open bite and exposed teeth), mouth guards are helpful. If uveitis is present, risk of eye damage from trauma is increased; ophthalmologic assessment is recommended. If visually impaired, guidelines for functionally 1-eyed athletes should be followed. (Giannini &amp; Protas, 1992)</p> <p>Juvenile dermatomyositis, idiopathic myositis</p> <p>Systemic lupus erythematosus</p> <p>Raynaud phenomenon</p> <p>Explanation: Athlete with juvenile dermatomyositis or systemic lupus erythematosus with cardiac involvement requires cardiology assessment before participation. Athletes receiving systemic corticosteroid therapy are at higher risk of osteoporotic fractures and avascular necrosis, which should be assessed before clearance; those receiving immunosuppressive medications are at higher risk of serious infection. Sports activities should be avoided when myositis is active. Rhabdomyolysis during intensive exercise may cause renal injury in athletes with idiopathic myositis and other myopathies. Because of photosensitivity with juvenile dermatomyositis and systemic lupus erythematosus, sun protection is necessary during outdoor activities. With Raynaud phenomenon, exposure to the cold presents risk to hands and feet. (Tench et al., 2002; Carvalho et al., 2005; Hicks et al., 2002; Clarkson et al., 2006)</p>	<p>Qualified yes</p>
<p>Sickle cell disease</p>	<p>Qualified</p>

Condition	May Participate
<p>Explanation: Athlete needs individual assessment. In general, if illness status permits, all sports may be played; however, any sport or activity that entails overexertion, overheating, dehydration, or chilling should be avoided. Participation at high altitude, especially when not acclimatized, also poses risk of sickle cell crisis.</p>	yes
<p>Sickle cell trait</p> <p>Explanation: Athletes with sickle cell trait generally do not have increased risk of sudden death or other medical problems during athletic participation under normal environmental conditions. However, when high exertional activity is performed under extreme conditions of heat and humidity or increased altitude, such catastrophic complications have occurred rarely. (Mercer &amp; Densmore, 2005; Pretzlaff, 2002; Kark, 2000; Kerle &amp; Nishimura, 1996; Bergeron et al., 2004) Athletes with sickle cell trait, like all athletes, should be progressively acclimatized to the environment and to the intensity and duration of activities and should be sufficiently hydrated to reduce the risk of exertional heat illness and/or rhabdomyolysis. (Bergeron et al., 2005) According to National Institutes of Health management guidelines, sickle cell trait is not a contraindication to participation in competitive athletics, and there is no requirement for screening before participation. (National Heart, Lung, and Blood Institute, 2002) More research is needed to assess fully potential risks and benefits of screening athletes for sickle cell trait.</p>	Yes
<p>Skin infections, including herpes simplex, molluscum contagiosum, verrucae (warts), staphylococcal and streptococcal infections (furuncles [boils], carbuncles, impetigo, methicillin-resistant <i>Staphylococcus aureus</i> [cellulitis and/or abscesses]), scabies, and tinea</p> <p>Explanation: During contagious periods, participation in gymnastics or cheerleading with mats, martial arts, wrestling, or other collision, contact, or limited-contact sports is not allowed. (Mast &amp; Goodman, 1997; Sevier, 1994; Centers for Disease Control and Prevention [CDC], 2003; CDC, "Community-associated MRSA information for clinicians", 2005.)</p>	Qualified yes
<p>Spleen, enlarged</p> <p>Explanation: If the spleen is acutely enlarged, then participation should be avoided because of risk of rupture. If the spleen is chronically enlarged, then individual assessment is needed before collision, contact, or limited-contact sports are played.</p>	Qualified yes

Condition	May Participate
Testicle, undescended or absence of one  Explanation: Certain sports may require a protective cup. (Gomez, 2003)	Yes

This table is designed for use by medical and nonmedical personnel. "Needs evaluation" means that a physician with appropriate knowledge and experience should assess the safety of a given sport for an athlete with the listed medical condition. Unless otherwise noted, this need for special consideration is because of variability in the severity of the disease, the risk of injury for the specific sports listed in Table 1 in the original guideline document, or both.

### CLINICAL ALGORITHM(S)

None provided

## EVIDENCE SUPPORTING THE RECOMMENDATIONS

### REFERENCES SUPPORTING THE RECOMMENDATIONS

[References open in a new window](#)

### TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The type of evidence supporting the recommendations is not specifically stated.

## BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

### POTENTIAL BENEFITS

- Appropriate determination of whether a child with a health condition should participate in a particular sport
- Decreasing the risk of injury in children and adolescents with medical conditions who wish to participate in athletic activities or sports

### POTENTIAL HARMS

Not stated

## QUALIFYING STATEMENTS

### QUALIFYING STATEMENTS

- The guidance in this report does not indicate an exclusive course of treatment or serve as a standard of medical care. Variations, taking into account individual circumstances, may be appropriate.



- For most chronic health conditions, current evidence supports and encourages the participation of children and adolescents in most athletic activities. However, the medical conditions listed in the table in the "Major Recommendations" have been assessed to determine whether participation would create an increased risk of injury or affect the child's medical condition adversely. These guidelines can be valuable when a physician examines an athlete who has one of the listed problems. Decisions about sports participation are often complex, and the usefulness of the table is limited by the frequency with which it recommends individual assessment when a "qualified yes" or a "qualified no" appears.
- Unfortunately, adequate data on the risks of a particular sport for athletes with medical problems often are limited or lacking, and an estimate of risk becomes a necessary part of the decision-making process. If primary care physicians are uncertain or uncomfortable with the evaluation and/or the decision-making process, they should seek the counsel of a sports medicine specialist or a specialist in the specific area of medical concern. If the physician thinks that restriction from a sport is necessary for a particular patient, then he or she should counsel the athlete and family about safe alternative activities.

## IMPLEMENTATION OF THE GUIDELINE

### DESCRIPTION OF IMPLEMENTATION STRATEGY

An implementation strategy was not provided.

## INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

### IOM CARE NEED

Staying Healthy

### IOM DOMAIN

Effectiveness  
Patient-centeredness

## IDENTIFYING INFORMATION AND AVAILABILITY

### BIBLIOGRAPHIC SOURCE(S)

Rice SG, American Academy of Pediatrics Council on Sports Medicine and Fitness. Medical conditions affecting sports participation. Pediatrics 2008 Apr;121(4):841-8. [67 references] [PubMed](#)

### ADAPTATION

Not applicable: The guideline was not adapted from another source.

**DATE RELEASED**

2008 Apr

**GUIDELINE DEVELOPER(S)**

American Academy of Pediatrics - Medical Specialty Society

**SOURCE(S) OF FUNDING**

American Academy of Pediatrics

**GUIDELINE COMMITTEE**

Council on Sports Medicine and Fitness

**COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE**

Council on Sports Medicine and Fitness, *2006-2007*: Eric W. Small, MD, *Chairperson*; Teri M. McCambridge, MD, *Chairperson-elect*; Holly Benjamin, MD; David T. Bernhardt, MD; Joel S. Brenner, MD, MPH; Charles Cappetta, MD; Joseph A. Congeni, MD; Andrew J. Gregory, MD; Bernard A. Griesemer, MD; Frederick E. Reed, MD; Stephen G. Rice, MD, PhD, MPH

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*Liaisons*: Claire Marie Ann LeBlanc, MD, Canadian Paediatric Society; James Raynor, MS, ATC, National Athletic Trainers Association

*Consultant*: Michael F. Bergeron, PhD

*Staff*: Anjie Emanuel, MPH; Jeanne Lindros, MPH

**FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST**

Not stated

**GUIDELINE STATUS**

This is the current release of the guideline.

All clinical reports from the American Academy of Pediatrics automatically expire 5 years after publication unless reaffirmed, revised, or retired at or before that time.

**GUIDELINE AVAILABILITY**

Electronic copies: Available from the [American Academy of Pediatrics \(AAP\) Policy Web site](#).

Print copies: Available from American Academy of Pediatrics, 141 Northwest Point Blvd., P.O. Box 927, Elk Grove Village, IL 60009-0927.

## **AVAILABILITY OF COMPANION DOCUMENTS**

None available

## **PATIENT RESOURCES**

None available

## **NGC STATUS**

This NGC summary was completed by ECRI Institute on April 7, 2009. The information was verified by the guideline developer on April 23, 2009.

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